



Level 3
Communications

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Magalie Roman Salas, Esq.
Secretary
Federal Communications Commission
1919 M Street, N.W.
Room 222
Washington, D.C. 20554

Re: CC Docket No. 98-78

Dear Ms. Salas:

Enclosed please find for filing in the above-referenced docket an original and twelve (12) copies of Comments of Level 3 Communications, Inc.

We originally filed these Comments on June 18th but the exhibits were inadvertently omitted. Please replace the Comments that were filed on June 18th with this set of Comments, which includes the exhibits.

Thank you for your attention to this matter and we apologize for any inconvenience this may have caused.

Sincerely,

Terrence J. Ferguson

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	
Petition of the Association for Local)	CC Docket No. 98-78
Telecommunications Services (ALTS) for a)	
Declaratory Ruling Establishing Conditions)	
Necessary to Promote Deployment of)	
Advanced Telecommunications Capability)	
Under Section 706 of the Telecommunications)	
Act of 1996)	

COMMENTS OF LEVEL 3 COMMUNICATIONS, INC.

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Before the
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Under Section 706 of the Telecommunications)	
Act of 1996)	

COMMENTS OF LEVEL 3 COMMUNICATIONS, INC.

Level 3 Communications, Inc. ("Level 3"), pursuant to the Commission's *Public Notice*, DA 98-1019 (rel. May 28, 1998) respectfully submits the following comments concerning the Petition of the Association for Local Telecommunications Services (ALTS) for a declaratory ruling regarding Section 706 of the Telecommunications Act of 1996 ("the Act"). In its petition, ALTS presents the flipside to the petitions for regulatory relief filed by Bell Atlantic, US West, and Ameritech (collectively, "Petitioning BOCs")¹. In essence, ALTS asks the Commission not only to deny the requests of the Petitioning RBOCs, but also to affirmatively state that advanced telecommunications services are subject to the pro-competitive provisions of the Act. Level 3 agrees completely with ALTS

¹Petition of Bell Atlantic Corporation for Relief from Barriers to Deployment of Advanced Telecommunications Services, CC Docket No. 98-11; Petition of U S WEST Communications, Inc. for Relief from Barriers to Deployment of Advanced Telecommunications Services, CC Docket No. 98-26; Petition of Ameritech Corporation to Remove Barriers to Investment in Advanced Telecommunications Capability, CC Docket No. 98-32.

and asserts that advanced telecommunications services must be subject to the same market-opening legal requirements as basic telephone service; given that telecommunications providers, including Level 3, have identified advanced telecommunications services, including Internet Protocol (IP) based services and xDSL transmission technologies, as the basis for the future of local telecommunications, failure to include them within the provisions of the Act would defeat most, if not all, of the pro-competitive objectives of the Act and postpone indefinitely the development of local competition.

Introduction

Level 3 intends to provide a full range of information and communication services, primarily to businesses, over the first end-to-end network designed and built specifically for Internet Protocol based services.² Level 3 expects to offer services over interconnected local and long distance networks it is building across the United States, and to expand internationally.

Level 3's business plan gives it a very keen interest in the issues raised by the ALTS Petition. Level 3 intends to become a leading provider of advanced telecommunications capabilities, both nationwide and internationally. The services that ALTS describes in its Petition are at the heart of Level 3's proposed network.

²Additional information about Level 3 is available on the Internet at <<http://www.L3.com/>>.

I. The Commission Should Grant the Declaratory Relief Requested by ALTS

Level 3 has recently filed comments in CC Docket No. 98-5 that address in detail the bottleneck issues facing providers of high-bandwidth digital communications services.³ Level 3 has also recently filed comments in the consolidated proceeding regarding the BOC Petitions.⁴ Rather than repeat those facts and arguments here, Level 3 attaches a copy of its comments in all of these proceedings as Exhibits A through C hereto, and incorporates them by reference. As explained in Exhibit A, TCP/IP-based communications networks, such as Level 3's, will face even more significant bottleneck issues than competitive networks built to traditional telephony standards. IP networks face both physical and bandwidth bottlenecks in seeking "last-mile" access to customers' premises. The full potential of these networks cannot be realized unless their operators can obtain technically efficient and economically reasonable access to the bandwidth of the embedded loop network. Without such access, only those businesses that can afford dedicated high-capacity facilities will be able to benefit from the full potential of Internet-based information and other packet-switched telecommunications services. Efficient and affordable access to loops will be the only viable means of bringing these services to the vast majority of residential consumers, as well as many small and mid-sized businesses who cannot afford high-capacity facilities.

³Comments of Level 3 Communications, Inc., *In the Matter of Petition of LCI Telecom Corp. for Declaratory Rulings*, CC Docket No. 98-5 (filed Mar. 23, 1998).

⁴See note 1, *supra*. Comments of Level 3 Communications, Inc. ("Comments in BOC 706 Proceeding"); Reply Comments of Level 3 Communications, Inc.

In its Comments regarding the BOC Petitions, Level 3 stated, "[T]his is a case where the BOCs should heed the maxim, 'Be careful what you wish for, because you might get it.'"⁵ In response to the BOC Petitions, ALTS has now asked the Commission to fulfill its obligations under Section 706 to promote the development of advanced telecommunications by declaring "that the interconnection, collocation, unbundling and resale requirements of Sections 251, 252, and 271 of the 1996 Act apply fully to digital and broadband services and facilities."⁶ Although Level 3 advocates a far more assertive position for the Commission to adopt to encourage the development of advanced telecommunications services,⁷ ALTS' request is a sensible, and simple, initial step for the Commission to take. Given that the Petitioning BOCs are seeking to exclude advanced telecommunications services and facilities from competition, and thereby extend their monopoly control of the local exchange network into the foreseeable future, an affirmative response to the ALTS Petition will send a clear signal that BOC intransigence and foot-dragging will no longer be tolerated.

⁵Comments in BOC 706 Proceeding at 6.

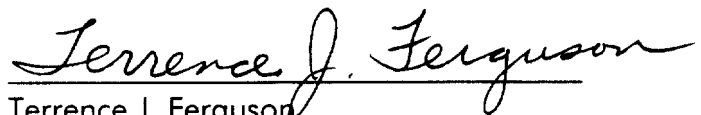
⁶ALTS Petition at 2.

⁷In its Comments in the LCI Petition proceeding and in the BOC Petitions proceeding, Level 3 proposes the divestiture of the local loops and serving wire centers from the incumbent LECs in order to place incumbent LECs and competitive LECs on more level ground for the development of local competition.

II. Conclusion

For the foregoing reasons, Level 3 supports the ALTS petition and encourages the Commission to take the steps proposed by ALTS to make clear to all telecommunications providers that advanced telecommunications services, just as any other telecommunications services, are subject to the pro-competitive provisions of the 1996 Act.

Respectfully submitted,

A handwritten signature in cursive script that reads "Terrence J. Ferguson". The signature is written in dark ink and is positioned above a horizontal line.

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June 18, 1998

CERTIFICATE OF SERVICE

I hereby certify that on this 18th day of June, 1998, copies of the foregoing
Comments of Level 3 Communications, Inc. were served by hand on the following:

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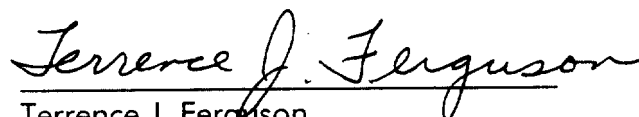

Terrence J. Ferguson

EXHIBIT A

DATE STAMP & RETURN

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MAR 3 1998

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of

Petition of LCI Telecom Corp.
for Declaratory Rulings

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)
)
)

CC Docket No. 98-5

COMMENTS OF LEVEL 3 COMMUNICATIONS, INC.

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Summary

LCI's Petition for a "Fast Track" approach to Section 271 raises issues that must be very familiar to this Commission. At every turn in the development of competition in the telecommunications industry, this Commission has had to deal with the refusal and reluctance of incumbent providers to offer their competitors full, fair, non-discriminatory and economically reasonable access to their networks. These issues arise again and again because there is an inherent conflict of interest between the incumbent's interest in maximizing its profits in the competitive segments of the market (which can be achieved by denying or restricting, as much as possible, competitors' access to the bottleneck elements of the network), and the public's interest in efficient, innovative, and affordable services (which requires that all competitors have comparable access to the bottleneck elements). The continuing problems with local competition, as described in LCI's Petition, are the direct result of this conflict of interest.

If the Nation is to realize the benefits that Congress intended in adopting the Telecommunications Act of 1996, it is imperative that the Commission resolve the problems arising from the BOCs' dual role as competitor and as operator of bottleneck facilities. Level 3 and other entrepreneurial companies are currently investing billions of dollars in the backbone infrastructure needed to provide advanced telecommunications and information services, including new Internet applications, to consumers and businesses. But, without efficient and reasonably-priced access to the BOC loop bottleneck (which is also a bandwidth bottleneck), these services will not be within the reach of ordinary consumers or small businesses. The technology to bridge the last mile exists, but the BOCs and other ILECs control the transmission facilities needed to use this technology.

History teaches that there is only one effective way to eliminate the BOCs' interest in preserving their downstream market share by impeding competitive

access to their bottleneck facilities: divestiture. The ownership of bottleneck facilities must be separate from any entity engaged in marketing retail services that depend on access to the bottleneck. This solution worked in the long distance market; no other attempted remedy, in any other market segment, has ever been a long-term success. It may be *theoretically* possible to use regulatory tools such as accounting safeguards, disclosure requirements, and complaint adjudication to combat denial of access, discrimination in prices and service quality, and other forms of bottleneck abuse. These tools can never be a *practical* solution, however, because regulators' resources are inherently limited and no matter how vigorously these tools are applied, the underlying incentive to exploit the bottleneck will remain intact.

The LCI "fast track" proposal, unfortunately, does not go far enough in addressing the problem. First, LCI's proposal does not distinguish between the bottleneck elements of the network, namely the loop facilities and the wire centers where competitors can access the loops, and other elements (switches, interoffice transport, signaling) that can more feasibly be provided by competitors. Second, LCI's proposal does not limit the BOC's ownership or control of the bottleneck facilities ("NetCo"), but instead provides a limited (and potentially ineffective) separation of ownership between the BOC and the entity marketing retail services ("ServeCo").

Level 3 therefore proposes that the Commission convert this proceeding into a broader investigation of structural alternatives for BOCs. The Commission should not limit this proceeding to an up-or-down consideration of LCI's specific proposal. Rather, it should consider Level 3's suggestion of divestiture of an independent loop company, as well as other alternatives such as an "independent system operator" that would manage the loop facilities but not own them.

Before the
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Washington, D.C. 20554

In the Matter of)	
)	
Petition of LCI Telecom Corp.)	CC Docket No. 98-5
for Declaratory Rulings)	

COMMENTS OF LEVEL 3 COMMUNICATIONS, INC.

Level 3 Communications, Inc. ("Level 3"), pursuant to the Commission's *Public Notice*, DA 98-130 (released Jan. 26, 1998), respectfully submits the following comments concerning the Petition of LCI International Telecom Corp. ("LCI") for Expedited Declaratory Rulings (the "Petition").

As explained below, Level 3 commends LCI for identifying a critical public policy issue and for starting a debate on this issue in its Petition, although we cannot support the specific solution proposed by LCI. LCI has correctly and thoughtfully analyzed the incentives and inherent conflicts arising from the Bell Operating Companies' ("BOCs") current and, if they have their way, much more extensive future participation in retail telecommunications services markets while controlling essential facilities to which their competitors need access. LCI's proposed "Fast Track" plan, however, would not eliminate these conflicts or create an incentive for the BOCs to encourage full utilization of their bottleneck facilities by competitors.

Although Level 3 thinks that the LCI proposal does not go far enough, we urge the Commission not simply to reject this proposal but to investigate the issues raised by LCI more thoroughly and to explore alternative approaches. The Commission and other telecommunications policy makers must find an effective solution to the issues identified by LCI if they are to achieve the widely-

shared goals of promoting efficiency, competitiveness, universal service, and increased consumer benefits in the telecommunications industry.

Introduction

Level 3, formerly named Kiewit Diversified Group, Inc.,¹ has recently announced plans to refocus its assets from multiple industries, and concentrate on its telecommunications and information services business. The company intends to provide a full range of information and communication services, primarily to businesses, over the first end-to-end network designed and built specifically for Internet Protocol (IP) based services. Level 3 expects to offer services over interconnected local and long distance networks it is building across the United States, and to expand internationally.

Level 3's business plan gives it a very keen interest in the issues raised by the LCI Petition. TCP/IP-based communications networks, such as Level 3's, will face even more significant bottleneck issues than competitive networks built to traditional telephony standards. IP networks face not only the same issues of physical access to customer premises as telephony networks, but also must overcome the additional hurdle of efficient access to bandwidth. The Public Switched Telephone Network (PSTN) is both a physical bottleneck, in that it is the only feasible method of access to the vast majority of customer premises, and a bandwidth bottleneck because PSTN facilities were designed to carry voice-grade analog communications. Recent technological developments have begun to unlock the bandwidth that theoretically exists within the massive deployed base of copper loops. ISDN technology permits transmission of 144

¹ Under its former name, Level 3 was the original majority stockholder of MFS Communications Company, Inc. Our current management team includes many former MFS executives. Additional information about Level 3 is available on the Internet at <http://www.L3.com/>

kilobits per second (kbps) of digital bandwidth over copper loops, while more recent and still-evolving Digital Subscriber Line ("xDSL") equipment can multiply this bandwidth to 6 megabits per second (mbps) or more on suitable facilities.

Just because these technical advances are available, however, doesn't mean that competitors can make use of them effectively. Anyone wanting to deploy high-bandwidth services to American homes or businesses on anything more than a niche basis must obtain access to the bottleneck facilities of the BOCs and other incumbent LECs. Because, as discussed below, current regulatory policies are not effective in encouraging the ILECs to offer access to these facilities on terms that encourage technical development and efficient investment in telecommunications networks, new approaches must be found to create an environment in which these incentives will exist.

The issue of access to the loop bottleneck is critical to the development of advanced telecommunications and information services in the United States. Congress has made it abundantly clear, in Sections 7(a) and 254(b)(2) of the Communications Act of 1934, 47 USC § 157(a), 254(b)(2), and Section 706 of the Telecommunications Act of 1996, that the public policy of the Nation is to facilitate the widespread deployment of these services. Just recently, Chairman Kennard described the immense potential benefits of this policy as follows:

"... the telecom industry is not just about to enter a revolution. It's in one.

"One of the megatrends of that revolution is technical: digitalization.

"Digitalization means that all communications technology will be the delivery of digital bits. It may be voice. It may be video. It may be audio.

"But it's all digital bits.

"A second megatrend is bandwidth -- how that data gets to you, how you get to that data. In this technological revolution I want to

see Moore's law applied to communications – a market so vibrantly competitive that transmission speeds double every 18 months.”²

Commissioner Powell has similarly recognized the significance of the growth of the Internet:

“the Internet . . . promises to match the advances brought about by all the other developments I described combined. This is so, not so much because of what it presently offers consumers, but what it teaches about the innovation potential of networks that are engineered as it is. The true genius of the Internet is that it uses an open architecture that allows users at different computers to share and manipulate information in a way that is virtually unhindered by the transmission media over which this information is carried, thus placing in the hands of millions of innovators a low cost option for creating, and distributing, their creations. The potential is boundless and holds the promise that, in the future, it will be near impossible to maintain a monopoly of communications goods and services.”³

Along the same lines, former Chairman Reed Hundt recognized, “we need a highspeed, congestion-free, always reliable, friction-free, packet switched, big bandwidth, data friendly network that is universally available, competitively priced, and capable of driving our economy to new heights. We need a data network that can easily carry voice, instead of what we have today, a voice network struggling to carry data.”⁴

These visions of the future cannot be turned into reality unless providers of high-bandwidth, packet-switched services can obtain technically efficient and

² Hon. William Kennard, remarks to Legg Mason “Telecom Investment Precursors” Workshop, March 12, 1998 (as prepared for delivery).

³ Hon. Michael Powell, “Technology and Regulatory Thinking: Albert Einstein's Warning,” remarks to Legg Mason Investor Workshop, March 13, 1998 (as prepared for delivery).

⁴ Hon. Reed Hundt, “The Internet: From Here to Ubiquity,” speech to the Institute of Electrical and Electronics Engineers, Aug. 26, 1997 (as prepared for delivery).

economically reasonable access to the bandwidth of the embedded loop network. Without such access, only those businesses that can afford dedicated high-capacity facilities will be able to benefit from the full potential of Internet-based information and other packet-switched telecommunications services. Efficient and affordable access to loops will be the only viable means of bringing these services to the vast majority of residential consumers, as well as many small and mid-sized businesses who cannot afford high-capacity facilities. Indeed, extending high-bandwidth access to tens of millions of new customers will create incentives for the development of innovative new services and applications that are technically possible, but not economically viable, with today's network.

Thus, the Commission should not underestimate the economic significance of the issues raised in this proceeding. Billions of dollars of investment in infrastructure and multiples of that in economic growth resulting from use of the infrastructure are at stake. If the Commission wishes to promote economically efficient investment in the telecommunications technologies of the 21st Century, it must assure that those who make the investment will have reasonably-priced, technically-efficient and non-discriminatory access to the bottleneck loop network. And, as the following comments will explain, the current structure of the ILEC industry in general, and of the RBOCs in particular, is inherently at odds with this goal.

I. BOCs Will Have an Unavoidable Conflict of Interest As Long As They Control Bottleneck Facilities Used by Their Downstream Competitors

LCI's discussion of barriers to entry, at pages 5-11 of its Petition, is an accurate account of the obstacles erected by the BOCs to delay and deter the efforts of competitors to access their networks. To the three barriers (OSS, unbundled network elements, and pricing) identified by LCI, Level 3 would add

a fourth critical impediment—the bandwidth bottleneck described in the Introduction. The BOCs as a rule have been extremely reluctant to provide competitors with unbundled loops that have been conditioned to provide high-bandwidth services (or, for that matter, any service other than Plain Old Telephone Service), even though the Commission's *Local Competition* decision unambiguously requires them to condition loop facilities for these purposes where technically feasible.⁵ The BOCs frequently claim that conditioned loops are unavailable or that technical constraints prevent them from meeting the customer's transmission specifications, *even when the BOC or its affiliate is advertising the availability of ISDN or xDSL service in the same market, or providing DS1 circuits using HDSL equipment (all of which require similar conditioning).*

LCI is also correct that the "common thread" in the barriers to entry is BOC conflicts of interest, as discussed at pages 11-12 of its Petition. This contention is not surprising—experience teaches that a monopolist who controls an essential facility will always have an incentive to discriminate in providing access to that facility to its rivals in downstream markets. The examples are too numerous to catalog, with the behavior of the pre-divestiture Bell System as the prime exhibit of this inherent trait of monopoly. If LCI's analysis of the current situation has any shortcoming, it is in glossing over the actual source of the BOCs' monopolistic incentive. LCI suggests that the BOCs' conflict of interest arises from their role as "operator of the local wireline network that all carriers rely upon to provide retail services" Petition at 11. More precisely, however, the conflict arises from their control of *bottleneck* facilities, namely the loop network. Other

⁵ *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, 11 FCC Rcd. 15499, paras. 380, 382 (1996), *aff'd in pertinent part and vacated in part*, *Iowa Utilities Board v. FCC*, 120 F.3d 753 (8th Cir. 1997), *cert. granted*, *AT&T v. Iowa Utilities Board* (U.S. Jan. 26, 1998).

components of the BOC networks can be duplicated or substituted on an economically reasonable basis (*e.g.*, interoffice transport, local switching, and signaling). Only the loop network cannot feasibly be provided on a competitive basis, and therefore this is the source of both the BOCs' monopoly power and their conflict of interest.

Because switches, signaling, and interoffice transport are relatively easily duplicated, the BOCs have no incentive to restrict or increase the cost of access to these elements of their networks (except to the extent they can tie these elements to the bottleneck loops). If a BOC did seek to increase the cost, impair the quality, or otherwise discourage access to its non-bottleneck network elements, competitors could resolve the problem relatively easily by installing their own facilities or buying similar services from a third party.⁶ In fact, many carriers have already done so. Although switching and interoffice transport require significant investment, the capital markets have been willing to finance investments in these facilities by numerous IXC's and CLECs. The same options do not exist, as a practical matter, for most loops. The cost of installing ubiquitous loop facilities throughout an area would be greater, by at least an order of magnitude, than the cost of the switching and transport needed to serve the same area. The impracticality of such a venture is clear from the simple fact that no carrier, even AT&T or a BOC (out of its own service territory), has been willing or able to invest its capital in constructing duplicate loops outside of limited high-density areas. Even if the capital for loop construction were available, the prospective operator would face further hurdles in obtaining

⁶ We are not suggesting that the BOCs will necessarily "behave themselves" with respect to non-loop elements, as in fact there are many instances of discriminatory and exclusionary behavior by the BOCs. But, as discussed in the text, competitors have "self-help" remedies available with respect to non-loop elements that simply do not exist, as a practical matter, when seeking access to loops.

access to public and private rights-of-way, and construction times that would be at least several times greater than for construction of a transport backbone.

Nor is there any realistic prospect that new technologies will enable widespread loop competition in the foreseeable future. As the Commission is well aware, prognostications of new loop technologies, including fiber to the home, hybrid fiber-coax, and wireless loops, were a dime a dozen in 1993-94, and formed part of the background to the Telecommunications Act. But none of these technologies made the leap from trade-press speculation to actual commercial operation, and limited market trials simply demonstrated that none of these systems could compete effectively against copper wire. Even a few years ago, it seemed clear that there was no real prospect for replacing copper loop technology.⁷ Today, this is even truer because the development of xDSL has opened new bandwidth for exploitation, making it harder to justify the use of alternative technologies and extending yet again the economic life of the copper loop.

Because the loop will remain the fundamental bottleneck in the nationwide telecommunications network for the foreseeable future, it will also remain the key to the BOCs' inherent conflict of interest. Resolution of this conflict is the central telecommunications policy issue confronting the Commission today. As discussed in the following sections, however, while LCI has correctly identified the problem, it has fallen short of devising an effective solution.

⁷ See RM-8614, *Unbundling of Local Exchange Carrier Common Line Facilities*, Petition for Rulemaking filed by MFS Communications Company, Inc., March 7, 1995, at 6-8.

II. The Solution to the Bottleneck Problem Must Eliminate the BOC Incentive to Restrict Access to its Loop Network

LCI's "Fast Track" proposal would be based on separation of the BOCs' "retail" operations from their "wholesale" functions (*i.e.*, provision of network elements and bundled "wholesale" services). Although this proposal incorporates the essential element of structural separation, and therefore would represent a major improvement over the status quo, it still has two critical flaws. First, the wholesale/retail distinction does not recognize the differing competitive characteristics of different elements of the so-called "wholesale" function, so that NetCo, the wholesale entity in LCI's plan, would still have internal conflicts of interest. Second, LCI's proposed structural solution of requiring the spin-off of at least a minority stock interest in ServeCo, the retail subsidiary, seems backwards because it is the entity controlling the bottleneck functions (NetCo), not the retail entity, whose potential misconduct needs to be restrained.

A. Structural Separation Is Indispensable If the Commission Is to Resolve the BOCs' Conflict of Interest

LCI identifies structural separation as the key tool for diffusing the BOCs' conflicts of interest and removing barriers to entry. Petition at 12-13. Level 3 agrees that structural separation must be an essential component of any plan that will be effective in dealing with these conflicts. The old Bell System, again, is the best evidence. Years of regulatory and judicial intervention, despite intensive efforts at great expense by both government and private parties, were not successful in turning the BOCs from their historic pattern of delaying, discouraging, and impeding long distance competition. Divestiture, however, quickly and effectively changed the BOCs' incentives and behavior. Old habits did not die instantly, especially given the extensive personal relationships and close physical proximity in many locations between the BOCs and their former parent company. Still, it took only a few years for the BOCs to realize that there

was no benefit to them in favoring one long distance company over another, and that their only interest was in facilitating as much usage of their network by long distance companies in general as they could. Today, it would be laughable to suggest that any BOC is likely to act in any way to create an advantage for its former parent company, or even for one of its former siblings (short of undoing the structural separation by merger or acquisition).

The lesson of the Bell System is that structural separation is much more effective in removing conflicts of interest stemming from control of bottleneck facilities than any other approach. Non-structural efforts to solve this problem inevitably require extensive and intrusive government oversight of the operation of the regulated company's business. This oversight, as a practical matter, can never be really effective because of budgetary constraints, plus the obvious fact that it is impossible for any regulator to understand a company's business as well as the company itself does. At the same time, this regulatory intrusion impairs the efficiency of the entire industry, since the regulated company's facilities (by definition) are crucial to the entire industry, and passes through to its competitors the added costs spawned by regulation. True structural separation, which includes a separation of ownership, and not mere segregation of services into different subsidiaries within the same enterprise (as in *Computer II*), is the only remedy for bottleneck conflicts that can be achieved with reasonable cost and speed.

B. Structural Separation Must Isolate the Bottleneck Elements (Loops) from the Other Elements of the BOC Network

As discussed in Section I, above, the BOC loop networks have bottleneck characteristics that are not shared by other elements of the BOC networks. Absent structural separation, BOCs have incentives to limit competitive access to the bottleneck loops; to restrict the use of these loops for new services such as

IP transport that threaten to cannibalize the BOCs' retail services; to increase the price of these loops above economic levels; and to use their loop revenues to cross-subsidize the more competitive elements of their businesses.

Under LCI's proposal, the loop network would be separated from the BOC's retail operations, but it would still be combined (in the "NetCo" entity) with other elements of the network that are more competitive, and with the marketing and sale of wholesale bundled telecommunications services. This structure would, to a large extent, preserve the existing conflict of interest within NetCo. This entity would still have an interest in cross-subsidizing its switching, transport, and other competitive service elements with revenues from loops; and therefore would still have a motive, as well as the ability, to inflate the price of loops and restrict competitive access to the loop bottleneck. In addition, as a marketer of bundled wholesale services, NetCo would have an interest in preventing, delaying, or limiting the use of its loops to provide new services that might bypass or otherwise undermine its sales of wholesale services, such as IP transport services.

For these reasons, the BOC loop networks should be structurally separated from the more competitive elements of the network. The LCI proposal fails to achieve this, and therefore should not be adopted in its present form.

C. Structural Separation Should Focus on Isolating the
 BOCs from Control of the Bottleneck Loops, Not from
 Retail Functions

The structural separation proposed by LCI focuses primarily on reducing the BOCs' control over retail operations (both in the local and the long-distance markets). LCI proposes that ServeCo, the retail entity under its plan, should be at least partially divested by the BOC. This proposal would limit (but not eliminate) the BOC's ability to influence ServeCo's pricing and marketing decisions in the

retail markets, since the ServeCo management would be responsible to other shareholders besides the BOC.

LCI's proposal, although again a step in the right direction, seems to miss the mark in this respect. The BOC conflict-of-interest problem is not caused by the BOCs' ability to market services at the retail level, but rather by their control over bottleneck loop facilities. Limiting the BOCs' control over ServeCo does little if anything to lessen their ability and incentive to abuse their control over the bottleneck loop network. Because the BOC would own 60% of ServeCo, it would still have an interest in giving ServeCo every possible advantage over its rivals in the retail market; and, because it would own 100% of NetCo, it would have many opportunities to extend such advantages to its affiliate.

The LCI proposal would create obvious incentives for overt discrimination by NetCo in favor of ServeCo in prices, quality of service, responsiveness, access to information, and the like.² This type of abuse might possibly be detected by rivals and corrected by regulatory oversight, although the price of the continual regulatory scrutiny and enforcement necessary to provide effective policing of discrimination would be far from negligible.

Moreover, NetCo may be able to promote the interests of ServeCo in various ways that are not facially discriminatory. For example, if ServeCo is not interested in providing high-bandwidth services in its territory, or particular portions of its territory, NetCo could refuse to provide *any customer* with conditioned loops capable of transmitting high bandwidths. This refusal would not be overtly discriminatory, but nonetheless would serve to protect ServeCo against competitive incursions by rival companies. Similarly, since competitive threats to ServeCo are likely to be concentrated in urban markets in the first instance, NetCo would have an incentive to maintain geographically averaged unbundled loop rates. By keeping loop rates artificially low in rural areas and